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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MASATO MIZUTA

Appeal 2015-006580[1]
Application 13/425,780[2]
Technology Center 2600

Before JEAN R. HOMERE, JOSEPH P. LENTIVECH, and SHARON FENICK, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1–21. Claim App'x. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm in part.

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[1] This appeal relates to Appeal 2016-003773 (Application 13/424,701) .
[2] Appellant identifies the real party in interest as Nintendo Co., Ltd. App. Br. 3.

Appellant's Invention

Appellant invented a computer game for outputting a corrected sound of a sound source (52) located behind a virtual camera (60), wherein the sound is directed towards the front of the camera capturing an audio-video scene (51) in a virtual space. Spec. ¶ 75, Fig. 3. In particular, upon detecting that the direction of the sound, as viewed from the virtual camera (60), corresponds to a predetermined direction, a predetermined filter is applied to muffle the sound, thereby correcting the sound source. *Id.* ¶¶ 76, 77, Fig. 12.

Illustrative Claim

Independent claim 1 is illustrative, and reads as follows:

> 1. A non-transitory computer-readable storage medium storing an information processing program executable by a computer of an information processing device for generating an image of a virtual space captured by a virtual camera and outputting a sound of a sound source provided in the virtual space, the program, when executed, causing the computer to perform:
>
> calculating a direction of the sound source as viewed from the virtual camera or a predetermined character provided in the virtual space;
>
> correcting the sound of the sound source by applying a predetermined filter to the sound when the calculated direction of the sound source corresponds to a predetermined direction as viewed from the virtual camera or the predetermined character provided in the virtual space; and outputting the corrected sound.

Prior Art Relied Upon

Chrysanthakopoulos	US 7,113,610 B1	Sept. 26, 2006
Mizuta-	US20130120569A1/	May 16, 2013

Rejections on Appeal

Claims 1–8, 10–14, and 16–21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Chrysanthakopoulos ("Chr" hereinafter). Final Act. 5–11.[3]

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chr. Final Act. 12.

Claims 1, 6, 7, 8, and 16–19 stand provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 11, 12, and 14–16 of Mizuta (co-pending application 13/424,701). Final Act. 13–4.

ANALYSIS

We consider Appellant's arguments *seriatim* as they are presented in the Appeal Brief, pages 11–16, and the Reply Brief, pages 2–7.[4]

Anticipation Rejection

Regarding the rejection of claim 1, Appellant argues that Chr does not describe "correcting the sound of the sound source by applying a

[3] The rejection of claim 9 has been withdrawn. Ans. 11.
[4] Rather than reiterate the arguments of Appellant and the Examiner, we refer to the Appeal Brief (filed January 20, 2015), the Reply Brief (filed June 29, 2015), and the Answer (mailed May 7, 2015) for their respective details. We have considered in this Decision only those arguments Appellant actually raised in the Briefs. Any other arguments Appellant could have made but chose not to make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2013).

predetermined filter to the sound *when the calculated direction of the sound source corresponds to a predetermined direction as viewed from the virtual camera or the predetermined character provided in the virtual space*". App. Br. 11. According to Appellant, because Chr uses the changing distance between the virtual sound source and the virtual speakers due to movements by the virtual listener, Chr teaches using only the magnitude of the vector between the virtual listener and the virtual sound source to change the volume for each speaker. *Id.* at 12 (citing Chr Fig. 4–6). That is, Appellants contend, Chr teaches using only the magnitude of the vector, as opposed to the direction of the vector, to correct the sound source due to changes in the orientation of the virtual listener or virtual speakers relative to the virtual sound source. *Id.* at 13. This argument is not persuasive.

We note at the outset that, in contrast to Appellant's argument, the claim does not require correcting the sound *when the direction of an associated vector* corresponds to a predetermined direction. Instead, the claim merely requires performing such a correction when the direction of the sound source corresponds to the predetermined direction. That is, although the claim requires using the direction of the sound source to correct the sound, it does not limit such a direction to the use of the direction component of a vector.

Chr discloses a virtual source positioning system including a plurality of speakers that track the position and orientation of a virtual listener relative to a sound in a virtual environment. Abstr. In order to compute the volume attenuation when the listener has moved or changed direction, Chr utilizes the orientation angle of the virtual listener (Fig. 6, item 354) to rotate the speakers by an equivalent angle, and subsequently determines the virtual

speaker vectors associated therewith. Chr. 8:45–67. Further, Chr discloses determining the Cartesian coordinates of the virtual sound source and the listener as a way to represent the changing position of the listener and the speakers relative to the sound source. Chr 10:13–31. Although Chr indicates normalizing the virtual sound source vector through a division of each Cartesian coordinate component by the magnitude of the vector, Chr also recognizes that *the magnitude of vector depends on the orientation* of the listener relative to the virtual source. Chr. 10:37–44. Thus, albeit Chr discloses using the speaker vector magnitude in the computation of the volume attenuation, the volume attenuation also implicates the orientation of the user because the magnitude is based on the listener's orientation relative to the virtual sound source. Accordingly, Chr's disclosure of correcting the volume when the listener has moved or changed direction such that the direction of the listener corresponds to the speakers relative to the sound source describes the disputed limitation.

For these reasons, we are not persuaded of error in the Examiner's rejection of claim 1 as being anticipated by Chr. Accordingly, we sustain the Examiner's 35 U.S.C. § 102(b) rejection of independent claim 1, as well as the rejection of independent claims 16–19, which Appellant argues are patentable for similar reasons. App. Br. 14. Because Appellant does not make separate arguments for the patentability of dependent claims 2, 5–8, 11–14, 20 and 21, we sustain the 35 U.S.C. § 102(b) rejection of those claims as well. *See id.*; 37 C.F.R. § 41.37(c)(1)(iv).

Regarding claim 3, Appellant argues that Chr does not describe the sound is corrected when the calculated angle is greater than a first threshold. App. Br. 15. We are persuaded. Although Chr's disclosure of volume

adjustment involves determining that the virtual speakers are moved by an equivalent orientation angle when the listener has changed orientation, Chr does not indicate a particular relationship between a calculated angle and a predetermined threshold. Accordingly, we do not sustain the Examiner's anticipation rejection of claim 3.

Regarding claim 4, Appellant argues that Chr does not describe increasing the degree of correction of the sound with an increase in a calculated angle. App. Br. 15. We are persuaded. Although Chr discloses using the orientation as a factor to determine how to adjust the volume, Chr does not describe a proportional relationship between the size of an orientation angle and the degree of adjustment of the volume. Accordingly, we do not sustain the rejection of claim 4, as well as claim 10 depending therefrom.

35 U.S.C. § 103 Rejection

Regarding the obviousness rejection of claim 15, Appellant has not provided separate argument. Therefore, we are not persuaded of error, and sustain the rejection.

Double Patenting Rejection

Appellant argues that the Examiner has not made a prima facie case for the provisional double patenting rejection because the office action does not present any analysis to support the rejection consistent with MPEP § 804 (III)(B)(1). App. Br. 15–16. This argument is persuasive. Consequently we do not sustain the rejection.

DECISION

For the above reasons, we affirm the Examiner's anticipation rejection of claim 1, 2, 5–8, 11–14, and 16–21. Likewise, we affirm the obviousness rejection of claim 15. However, we reverse the Examiner's anticipation rejection of claims 3, 4, and 10, as well as the double patenting rejection of claims 1, 6, 7, 8, and 16–19.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART